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Uremic tumoral calcinosis improved by kidney transplantation

F Buchkremer[1] and S Farese[1]

[1]*Department of Nephrology and Hypertension, University of Berne, Inselspital Berne, Switzerland*
Correspondence: *S Farese, Klinik und Poliklinik für Nephrologie und Hypertonie, Inselpital Bern, Freiburgstrasse, Bern 3007, Switzerland. E-mail: stefan.farese@insel.ch*

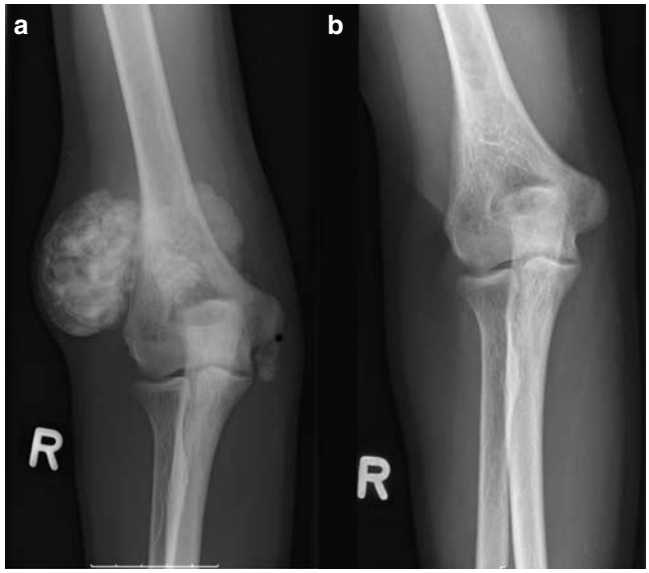

Figure 1 | Right elbow before (a) and after (b) transplantation.

A 23-year-old patient with congenital obstructive uropathy was admitted for kidney transplantation. A painless swelling over his right elbow had developed several weeks earlier. He was on peritoneal dialysis for 6 years and had a long-standing history of renal bone disease. Two years before admission, severe hyperparathyroidism necessitated parathyroidectomy. The months leading up to transplantation were complicated by marked elevation of serum phosphorus ($\sim 2.5\,mmol\,l^{-1}$), with normal to mildly elevated calcium (max. $2.7\,mmol\,l^{-1}$), normal iPTH ($\sim 20\,pg\,ml^{-1}$), and normal serum alkaline phosphatase ($\sim 50\,U\,l^{-1}$) concentrations.

On examination, a rock-hard swelling measuring 8×4 cm was noted over the right elbow. Radiographs revealed extensive periarticular calcifications with cystic and multilobulated appearance (Figure 1a), and biopsy specimens yielded hydroxy-apatite crystals, which suggested uremic tumoral calcinosis.

Uremic tumoral calcinosis is a rare form of metastatic tissue calcification. The most common sites of uremic tumoral calcinosis are shoulders, elbows, and hands. The pathogenesis of this condition is not completely understood. Hyperphosphatemia, as in our patient, is the most consistently reported laboratory abnormality. Radiographically and histologically it is indistinguishable from idiopathic tumoral calcinosis, a rare hereditary syndrome, for which missense mutations in the genes for fibroblast growth factor 23 and polypeptide *N*-acetylgalactosaminyltransferase 3 have been described.

Six weeks after uneventful recovery from kidney transplantation, there was complete resolution of the calcified mass (Figure 1b).